

REMARKS

Claims 1, 3-6 and 11 are pending in the above-identified application.

Submission of Declaration under 37 CFR 1.132

Submitted with this Submission is Declaration under 37 CFR 1.132 (herein and after the "Akita Declaration"). The Akita Declaration shows that Examples 3 and 4 (present invention) exhibit unexpected advantageously improved resolution properties over Comparative Example 1 at 0.12 μm . It is also apparent from a review of Sheet 1, as well as the opinion stated by Declarant Akita, that Examples 3 and 4 exhibit advantageously improved resolution properties at 0.13 μm .

It is respectfully submitted that the Akita Declaration rebuts the position stated at the bottom of page 4 of the previous Final Office Action dated November 14, 2006 which indicated that the results in Table 2 at page 19 of the present specification did not show "...any *unexpectedly superior* results (the differences in the sensitivity and resolution are very minor)." It is respectfully submitted that the evidence of the Akita Declaration rebuts this conclusion. *In re Papesch*, 315 F.2d 381, 137 USPQ43 (CCPA 1963); MPEP 2144.09, Rev. 5, August 2006, page 2100-157.

Issues under 35 USC 103(a) Raised in Previous Office Action

The previous Office Action of November 16, 2006 indicated that the pending claims were rejected under 35 USC 103(a) as being unpatentable over Kodama '130 (USP 6,291,130) in view of Ishikawa '854 (USP 4,671,854).

The above-noted rejection is traversed based on the reasons specified below, as well as based on the additional evidence of the Akita Declaration discussed above.

Present Invention and Its Advantages

The present invention is directed to a positive resist composition which includes, among other components, (A) a resin derived from monomers having an adamantane group, and (D) a polyvalent carboxylic acid ester selected from the group recited in present claim 1. As shown by the comparative test results presented in the present specification in Table 2, employment of the combination of components (A) and (D), along with the other components, results in advantageously improved effective sensitivity and resolution properties. In addition, the above-noted Akita Declaration further confirms the unexpected, advantageous properties exhibited by embodiments of the present invention.

Distinctions over Kodama '130

Kodama '130 discloses a positive photosensitive composition which includes (A) a component which generates an acid upon irradiation with an actinic ray or radiation (B) a resin having a group which is decomposed by the action of an acid to increase solubility in an alkaline developing solution, wherein the resin contains at least one structure represented by the formulae (I), (II) and (III) as noted at column 3-4, for example. Kodama '130 also mentions at column 84, lines 50-55 that the composition may further include, "...an acid decomposable dissolution accelerating compound, a dye, a plasticizer, a surface active agent, a photosensitizer, an organic basis compound, a compound which accelerates the solubility in a developing solution, and the like."

Kodama '130 fails to disclose or suggest any of the polyvalent carboxylic acid esters of component (D) employed in the composition of the present invention. As admitted in the Office Action of May 5, 2006, Kodama '130 merely provides a general suggestion that a "plasticizer" may be contained in the composition. However, the plasticizer may also not be present and there is no indication of what type of plasticizer can be used from among the many plasticizers that would have been available. Further, the general suggestion at column 84 of Kodama '130

mentions many other possible additives as alternatives to a plasticizer. Consequently, Kodama '130 clearly falls short of supporting a prima facie argument in favor of obviousness because an element from the present claims is absent, i.e. the polyvalent carboxylic acid ester (D).

Distinctions over Ishikawa '854

Ishikawa '854 discloses a method for preparing a printed circuit board with solder plated circuit and through-holes, wherein the method may employ a photosensitive resin composition. Ishikawa '854 discloses at the bottom of column 3 that the resin composition may include, among other components, a chelating agent, plasticizer and aqueous medium. Ishikawa '854 discloses at column 4, lines 46-68 a variety of possible plasticizers, including for example dioctyl adipate.

Ishikawa '854 fails to disclose or suggest the composition of the present invention including the combination of a resin (A) derived from monomers having an adamantane group, and (D) a polyvalent carboxylic acid ester. Thus, significant patentable distinctions exist between the present invention and this reference.

Absence of Basis to Combine Kodama '130 with Ishikawa '854

In addition to the above it is submitted that inconsistent features between the Kodama '130 and Ishikawa '854 references prevent these references from being combined together. The composition of Kodama '130 does not appear to employ a chelating agent for the purpose of reacting with copper ions liberated during anionic electrodeposition as required by the compositions disclosed by Ishikawa '854. In addition Ishikawa '854 fails to disclose or suggest any of the specific components (A) or (B) requiring a structure represented by formula (I), (II) and (III) as required by Kodama '130. The Office Action fails to resolve these significant inconsistent features such that Kodama '130 composition can not be modified by merely selecting a specific plastizer component from the Ishikawa '854 reference. Note that the fact that references can be combined or modified fails to be sufficient to establish prima facie

obviousness. In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990). Further still, the comparative test results exhibited by the composition of the present invention and summarized in Table 2 of the present specification, as discussed above, rebut any alleged prima facie obviousness since the results represented evidence unexpected, advantageous properties not recognized by the cited references. Therefore, numerous and significant patentable distinctions exist between the present invention and the above-discussed references.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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Enclosure: Akita Declaration under 37 CFR 1.132